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# A New Species of Marine Isopod of the Genus *Gnathia* from the Fiji Islands, the South Pacific

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**Abstract** *Gnathia nicembola* n. sp. is described as the first member of Gnathiidae (Crustacea: Isopoda) from the Fiji Islands. This new species resembles *G. halei* Cals, but is discernible from the latter in having, though small, inferior frontolateral processes on the cephalon.

The marine isopod fauna of the tropical Pacific Ocean is poorly known. While examining a sample of marine isopods collected from the Fiji Islands and deposited in the Zoological Museum of Copenhagen, I found a single male of *Gnathia* Leach, 1813 (Cymothoidea: Gnathiidae). This specimen has some prominent characteristics and is apparently new to science. It is described herewith as the first record of this genus from the Fiji Islands.

I am very grateful to Dr. T. Wolff of the Copenhagen Zoological Museum for making the material available to the author. Mrs. T. McLeary kindly revised the English text. The holotype is deposited in the Copenhagen Zoological Museum.

## *Gnathia nicembola* sp. nov.

**Material.** Holotype: male. Type locality: Entrance channel to Suva harbour, the Fiji Islands (18° 09'S, 178° 27'E), 76-84 m deep. T. Wolff leg. (17 May 1965). The specimen is almost transparent, probably due to the long time of preservation in alcohol. This made it difficult to observe its surface structures in detail.

**Etymology.** The specific name comes from the Fijian "nice mbola", which means "you are good-looking".

**Diagnosis.** Frontal margin of the cephalon armed with an apically pointed, mediofrontal process and two pairs of frontolateral processes. Superior frontolateral processes triangular in shape, bearing 4-5 simple setae on its dorsal surface, inferior frontolateral processes very small without any setae.

**Description of the holotype male.** Total length (tip of mediofrontal process of head to tip of telson) 2.6 mm, maximum width (at pereonite 2) 0.83 mm.

Cephalon (Fig. 1A) smooth, about as long as wide; frontal margin with a large,

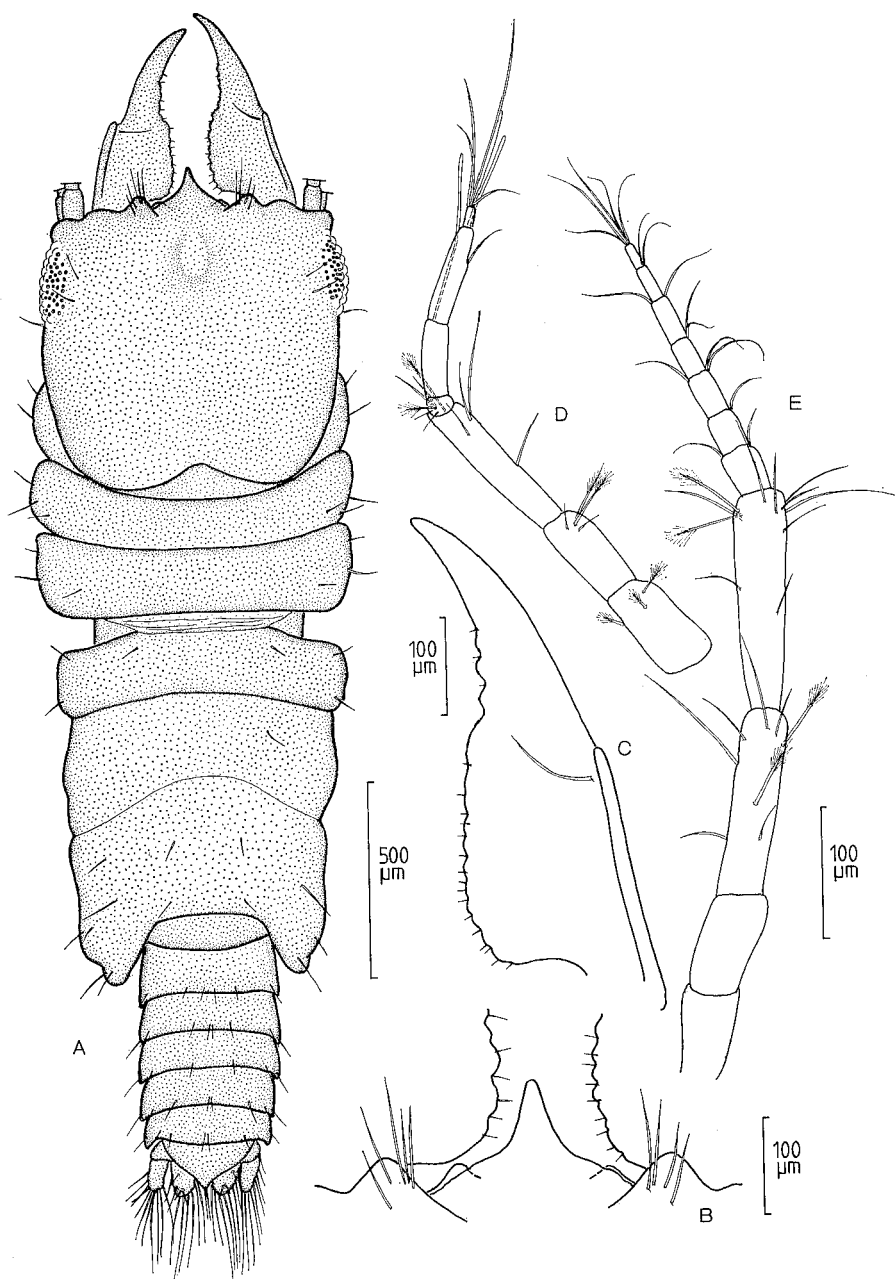


Fig. 1. *Gnathia nicembola* sp. nov., holotype male. A. Habitus, dorsal; B. Front of cephalon, dorsal; C. Mandible; D. Antenna I; E. Antenna II.

pointed, mediofrontal process; superior frontolateral processes small and triangular, with 4–5 short, simple setae; inferior frontolateral processes (Fig. 1B) very short, without setae, partly hidden by mediofrontal process, round apically; anteromedian surface of cephalon with shallow dorsal sulcus. Eyes large, composed of about fifty

small ocelli; pigmentation scarcely visible, probably fading away during the preservation; a few short, simple setae located dorsal and posterior to the eyes.

Pereonite I short, smooth, its lateral margins visible in dorsal view, with a pair of short simple setae laterally; pereonites II-VI smooth, with a few short, simple seta, sixth pereonite longest; pereonite VII very short, hidden beneath posterior margin of pereonite VI, without setae.

Pleon straight with pleonites subequal in length, bearing short, simple setae on its lateral and posterior margins.

Telson (Fig. 2B) triangular, as long as wide, lateral margins smooth, slightly sinuous; terminal setae simple, relatively short.

Antenna I (Fig. 1D) with three peduncle segments, third longest; flagellum consisting of four articles, first very short, third longest; second, third and fourth articles each with an aesthetasc. Antenna II (Fig. 1E): peduncle 4-segmented, fourth segment longest, slightly longer than the third; first and second segments

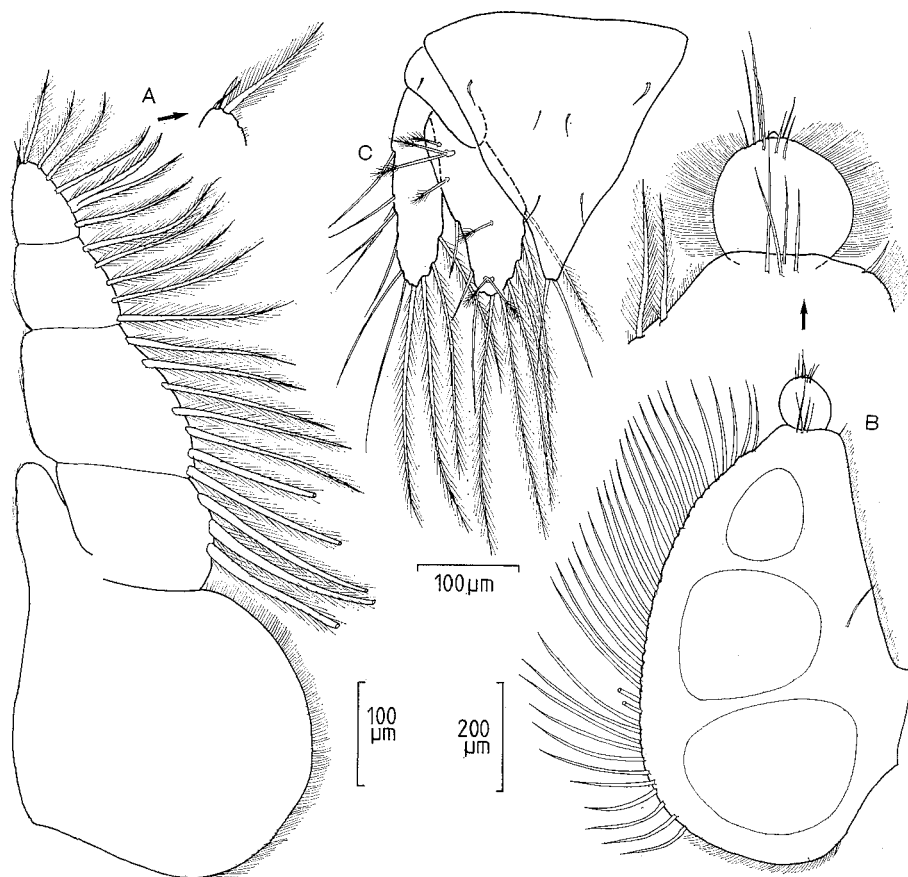


Fig. 2. *Gnathia nicembola* sp. nov., holotype male. A. Maxilliped; B. Pylopod; C. Tail fan.

subequal in length, short; flagellum consisting of seven articles.

Mandible (Fig. 1C) shorter than length of cephalon, with a simple seta on outer dorsal margin; mandibular blade armed with minute setae, shallowly incised and forming numerous, round teeth. Maxilliped (Fig. 2A) consisting of five segments; large basal segment with an elongate lobe at its inner distal corner, this lobe reach-



Fig. 3. *Gnathia nicembola* sp. nov., holotype male. A. Pereopod I; B. Pereopod II; C. Pereopod III; D. Pereopod IV; E. Pereopod V.

ing the base of third maxillipedal segment; four distal segments bearing finely fringed setae on each outer margin; apical segment armed apically with two short simple setae in addition to the setae on its outer margin. Pylopod (Fig. 2B) with broad basal segment, bearing finely fringed setae (illustrated as simple setae) on its convex medial margin and four simple setae apically; second segment small, nearly circular, with seven simple setae near its tip; third segment greatly reduced, minute.

Pereopods I-V (Fig. 3) relatively long and slender, with several simple setae of variable length and only few tubercles; carpus of pereopod V with three stout, denticulate spines.

Uropod (Fig. 2C): exopod narrower than endopod, subequal in length to the latter; endopod with seven feathered sensory setae on dorsal surface.

*Remarks.* The present new species, *G. nicembola*, resembles *G. halei* Cals, 1973, from Brisbane, Australia, in having a large, pointed mediofrontal process and setose superior frontolateral processes. However, the new species differs from the latter in having inferior frontolateral processes, though small, on its cephalon. *G. halei* has no inferior frontolateral processes. The superior frontolateral processes of the new species are similar to the counterpart in *G. halei*, but its armature is different because 4-5 setae are present in the former, while 7-8 setae in the latter. The shape of pylopod segments is also different between these two species. In *G. halei*, the second pylopod segment is elongate oval, about two times longer than wide, whereas it is nearly circular in *G. nicembola*.

### References

- Cals, P. 1973. Sur une espèce nouvelle de *Gnathia* d'Australie: *Gnathia halei* (Crustacés, Isopodes). Bull. Mus. Hist. Nat., Paris, 3<sup>e</sup> sér., 115: 295-305.
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